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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/505,783	02/17/2000	Tadao Inoue	122.1393	6995

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EXAMINER	
SEDIGHIAN, REZA	

ART UNIT	PAPER NUMBER
2633	

DATE MAILED: 06/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/505,783	INOUE ET AL.	
	Examiner	Art Unit	
	M. R. Sedighian	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,20 and 22-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,20 and 22-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5 and 11* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

1. This communication is responsive to applicant's response of 4/8/04 in the application of Tadao Inoue et al. for "Light output control circuit" filed 2/17/2000. Claims 1, 20, and 22-35 are now pending.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 20, and 22-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Senma et al. (US Patent No: 4,856,008).

Regarding claims 1, 22, 26, 30-32, and 34-35, Senma discloses a light output control circuit (col. 3, lines 35-40 and fig. 3), comprising: a photodetector (12, fig. 3) which detects the light output of a light emitting device (10, fig. 3) to thereby provide a light output detection value (col. 4, lines 2-12); a comparator (14, fig. 3) which compares the light output detection value (V_M, fig. 3) with a reference value (V_{ref}, fig. 3) to thereby provide a comparison result (col. 4, lines 14-16); a light output control device (col. 3, lines 42-44 and 15, 16, 17, 19, fig. 3) which performs discrete control actions to control the light output of the light emitting device (note that the output of counter 15 drives the LD circuit 11) in accordance with the comparison result (col. 4, lines 14-29); and a switching circuit (15, fig. 3) which counts the number of control actions (col. 4, lines 37-47) performed by the light output control device and which instructs the light output control device (col. 4, lines 42-45). Senma differs from the claimed invention in that Senma does not specifically disclose a power-up mode until number of control actions reaches a

predetermined value, and a steady-state mode thereafter. Senma teaches a counter 15 which its count value increases gradually, wherein intensity of light emitted from laser increases (col. 4, lines 47-50) until it reaches a predetermined value (col. 4, lines 53-55). Senma further teaches counter 15 returns to a disable state (col. 4, lines 60-61), wherein the magnitude of drive current supplied to the laser maintained at its current value (col. 4, lines 60-66). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention that the light output control circuits such as the ones of Senma can provide a power-up mode and a steady-state mode, in order to automatically control the light output power and to provide a stabilized output light. As to claims 22 and 26, Senma teaches the counter increases or decreases a count value (col. 4, lines 37-41). As to claim 34 and 35, regarding the count operation to increase or decrease the count value by a first and a second amount, Senma teaches a count value can be determined by an up/down counter (col. 4, lines 22-23, 27-29), wherein the count value can be increased or decreased (col. 4, lines 45-50). It would have been obvious that by counting up or counting down, a first and a second amount can be reached, wherein the second amount can be smaller than the first amount such that a stable operation can be reached.

Regarding claims 20, 23, 27, and 33, as to a coarse and fine light output control, Senma teaches raising the light output power of the laser 10 until the monitoring voltage V_M and the reference voltage V_{ref} nearly coincide (col. 4, lines 14-23, 56-68, col. 5, lines 1-5). Accordingly, when raising the light output power occurs, a coarse mode of operation, and when stability has been reached, a fine mode of operation results.

Regarding claims 24-25 and 28-29, Senma teaches the light emitting device (10, fig. 3) is a laser diode (col. 4, line 10).

4. Applicant's arguments with respect to claims 1, 22, 26, 30, 31, 32, 34, and 35 have been considered but are moot in view of the new ground(s) of rejection.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (703) 308-9063. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

M. R. Sedighian

M.R. SEDIGHIAN
Primary Examiner
Art Unit: 2633